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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,683	11/13/2003	Ihab Soliman	FMC1624PUS/202-1442	9108
28395	7590	10/12/2005	EXAMINER	
BROOKS KUSHMAN P.C./FGTL 1000 TOWN CENTER 22ND FLOOR SOUTHFIELD, MI 48075-1238			PANG, ROGER L	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,683

Applicant(s)

SOLIMAN ET AL.

Examiner

Roger L. Pang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 6-8 and 10-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The following action is in response to communications filed for application 10/712,683 on August 22, 2005.

Election/Restrictions

Claims 2-4, 6-8, and 10-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected subcombinations, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on April 18, 2005.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Rosi. With regard to claims 1 and 9, Rosi teaches a speed-based control system for a swap-shift transmission (Col. 3) comprising: a first gearset controller for controlling a pressure p_{kab} on a first pressure-actuated friction element for the first gearset; a second gearset controller for controlling pressure p_{kzu} on a second pressure-actuated friction element for the second gearset; the first and second gearset controllers simultaneously controlling friction element pressure for the first and second gearsets during a swap-shift wherein friction element pressure for the second gearset is increased

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as friction element pressure for the first gearset is decreased during progression of a swap-upshift between two overall gear ratios (Col. 3, lines 56-60); and an adaptive pressure control system configured to boost pressure in the pressure-actuated friction element for the second gearset before a start of torque transfer between the friction elements and to control pressure boost time t_{sf} to a calibrated value to avoid a gear ratio change during pressure boost for the friction element for the second gearset, the control system including a control unit to detect boost time errors (Col. 6) during a current shift and an error conversion unit for converting the errors to boost pressure time adjustments t_{adtsf} for the friction element for the second gearset during a subsequent shift.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosi as applied to claim 1 above, and further in view of Kozaki. Rosi teaches the system, wherein the transmission has a second speed sensor for sensing speed n_t of a power input element of the second gearset. Rosi lacks the teaching of first and third speed sensors. Kozaki teaches a speed-based control system, wherein a transmission has a first speed sensor 106 for sensing input shaft speed, a second speed sensor 117 for sensing speed of a power input element of the second gearset and a third speed sensor 107 for sensing speed of a power output element of the second gearset, the speed sensors providing speed information to the adaptive pressure control system to meet shift

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synchronization requirements (Cols. 20-21). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rosi to employ the speed sensors and adaptive pressure control in view of Kozaki in order to suppress as hock upon a gearshift (Col. 1).

Response to Arguments

Applicant argues the following points:

- 1) the transmission of the present invention is claimed to be different than the Rosi transmission.
- 2) the rapid filling is not followed by a torque transfer phase.
- 3) the sensors taught by Kozaki are used in a completely different environment for a completely different controls.

With regard to Issue 1:

Applicant has disclosed a transmission comprising two gearboxes in series, one being an overdrive gearbox, and another being a regular gearbox. However, applicant has not claimed this. Applicant has claimed two gearsets, each gearset having at least one friction element establishing two gearset gear ratios. Rosi teaches the controls of an automatic transmission. Applicant is directed to Figure 2 of the previously cited Yuasa reference, which shows an automatic transmission. Without taking into account the specific brakes, clutches and connections, an automatic transmission like this comprises of two or more adjacent gearsets. Each gearset comprises of at least one clutch or brake, and the two different gear ratios in each gearset are produced by braking/unbraking or clutching/declutching. This is how the transmission, as claimed, has been interpreted.

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With regard to Issue 2:

In claim 1, applicant has only claimed that pressure is boosted “before a start of torque transfer.” Applicant has not claimed that the torque transfer immediately follows the pressure boost.

With regard to Issue 3:

The “different transmission” argument has already been addressed. With regard to the sensors, applicant never claims a link between the adaptive pressure control and how that affects shift synchronization requirements. Applicant merely claims that the sensors provide information to the control system to meet said requirements (which can be to initiate the clutching and declutching process). Applicant claims sensing an “input shaft speed”. This is interpreted as any input shaft speed, which sensor 106 qualifies for. The second speed sensor for the input of the second gearset can be interpreted as sensor 117, since that is sensing the input of the transmission, which comprises of the second gearset. The third sensor for sensing the speed output of the second gearset can be interpreted as sensor 107, since that is sensing the output for of the transmission, which comprises the second gearset.

It is suggested that if applicant wants to distinguish the actual transmission configuration being controlled of the present invention and that of the prior art, that applicant amend to add limitations that will clearly distinguish the two.

Applicant’s arguments have been considered, but are not persuasive.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. The central facsimile number is (571) 273-8300. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

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Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571) 273-8300) on _____ (Date)

Typed or printed name of person signing this certificate:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roger L. Pang whose telephone number is 571-272-7096. The examiner can normally be reached on 5:30am to 4:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'R. Pang', with a long horizontal line extending to the right.

Roger L Pang
Primary Examiner
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October 7, 2005